ASSIGNMENT 5

Textbook Assignment: "Weather Observation," chapater 10, pages 10-1 through 10-27.

5-1. What agency is responsible for U.S. Navy meteorological and oceanographic supports and services?

1. NAVOCEANCEN
2. Weather Bureau
3. NOAA
4. National Weather Service

5-2. Which of the following activities are primary contributors to NAVOCEANCEN?

1. Navy units at sea
2. Marine Corps units only
3. Navy and Marine Corps units
4. National Weather Services

5-3. What are the percentages of (a) nitrogen and (b) oxygen in Earth's atmosphere?

1. (a) 57 (b) 21
2. (a) 21 (b) 75
3. (a) 78 (b) 21
4. (a) 78 (b) 25

5-4. In which region is the quantity of water vapor much greater?

1. Poles
2. Oceans
3. Land
4. Equator

5-5. Moist air with a temperature of 50° is heavier than drier air of the same temperature.

1. True
2. False

5-6. In the Northern Hemisphere, we refer to winds of high pressure by which of the following terms?

1. Hurricane
2. Cyclone
3. Anti-cyclone
4. Typhoon

5-7. Which of the following types of winds are associated with doldrums?

1. Tropical breezes only
2. Trade winds
3. Prevailing winds only
4. Tropical breezes and prevailing winds

5-8. Between the prevailing westerly and the trade wind zones lies a subtropical high referred to as the

1. horse latitudes
2. doldrums
3. polar front zones
4. polar easterlies

IN ANSWERING QUESTIONS 5-9 THROUGH 5-12, SELECT FROM COLUMN B THE DESCRIPTION THAT MATCHES THE WINDS IN COLUMN A. RESPONSES WILL ONLY BE USED ONCE.

A. WINDS	B. DESCRIPTION
5-9. Doldrums	1. Results from the deflection caused by the coriolis force as air moves polewards
5-10. Tradewinds	2. Areas of sub-tropical high-pressure
5-11. Horse latitudes	3. Move north and south of the equator with the Sun
5-12. Prevailing westerlies	4. Found north and south of the doldrums

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5-13. What type of weather occurs when doldrums are absent in the equatorial region?

1. Rain squalls
2. Thunder storms
3. Fog
4. Haze

5-14. Where are horse latitudes located?

1. 0° to 15°
2. 20° to 35°
3. 30° to 40°
4. 30° to 50°

5-15. Which of the following cloud types is NOT a low etage cloud?

1. Conolonimbus
2. Stratocumulus
3. Nimbostratus
4. Straus

5-16. Which of the following cloud types is thin, wispy, or hairlike?

1. Cirrus
2. Cirrocumulus
3. Cirrostratus
4. Stratocumulus

IN ANSWERING QUESTIONS 5-17 THROUGH 5-20, SELECT FROM COLUMN B THE DESCRIPTION THAT MATCHES THE CLOUD LISTED IN COLUMN A. RESPONSES WILL ONLY BE USED ONCE.

A. CLOUD	B. DESCRIPTION
5-17. Cirrocumulus	1. Fattened globular masses
5-18. Altocumulus	2. Dense vertical development
5-19. Stratocumulus	3. Mackerel sky
5-20. Cumulus	4. Soft and gray with dark spots

5-21. What is the average atmospheric pressure at Earth's surface?

1. 1010.4 MB
2. 1013.2 MB
3. 1015.7 MB
4. 1017.8 MB

5-22. What is the approximate average atmospheric pressure per square inch at sea level?

1. 11
2. 15
3. 17
4. 18

5-23. How accurately can an aneroid barometer be read?

1. 1.00
2. 0.50
3. 0.10
4. 0.01

5-24. What occurs along the boundary when distinctly different air masses touch?

1. Haze
2. Fog
3. Cloudiness
4. Clearing

5-25. How is the meeting of distinctly different air masses referred?

1. Low pressure
2. High pressure
3. Trough
4. Front

5-26. When you are drawing isobars, what is the value of the base millibar?

1. 900 mb
2. 950 mb
3. 1000 mb
4. 1050 mb

5-27. Isobars are lines drawn on a chart that connect areas of equal

1. height
2. depth
3. pressure
4. temperature

5-28. What is the millibar separation value between each isobar in the area from 25° to the South Pole?

1. 6 mb
2. 2 mb
3. 10 mb
4. 4 mb

5-29. Which of the following rules should you keep in mind when you are drawing isobars?

1. The isobaric pattern is apt to be complicated when the wind circulation is strong
2. The isobaric pattern is apt to be simple with a large scale movement of air
3. Isobars are faired by including minor variations in wind circulation
4. Isobars are not affected by the strength of wind circulation

5-30. When you are analyzing isobars and accompanying weather, you should remember that the closer the isobars are together the

1. greater the winds will be in that area
2. greater the amount of precipitation in that area
3. slower the winds will be in that area
4. larger the area of high or low pressure

5-31. If when analyzing isobars you determine you have a high-pressure system, the wind will blow in which of the following directions?

1. In toward the center, across the isobars
2. In toward the center, parallel to the isobars
3. Out from the center, across the isobars
4. Out from the center, parallel to the isobars

5-32. Which of the following tendencies occurs after a front passes?

1. Pressure usually falls
2. Pressure usually rises
3. Pressure stabilizes
4. Pressure is erratic

5-33. Which of the following wind characteristics accompany a warm front in the Northern Hemisphere?

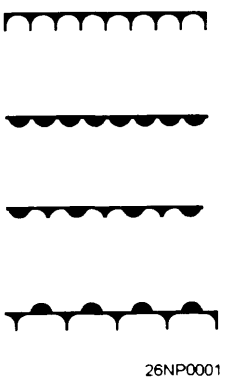
1. The wind speed decreases as the front approaches and shifts abruptly once it reaches your position
2. The wind speed increases as the front approaches and rarely shifts as abruptly as a cold front
3. The wind speed decreases as the front approaches and will shift on passage in a clockwise direction
4. The wind speed increases as the front approaches and will shift on passage in a counterclockwise direction

5-34. During a warm front passage, how is temperature affected?

1. Rises slowly
2. Rises gradually
3. Rises quickly
4. Starts slowly and increases with the passage

IN ANSWERING QUESTIONS 5-35 THROUGH 5-41, SELECT THE SYMBOL FROM COLUMN B THAT MACHES THE DESCRIPTOR IN COLUMN A. RESPONSES MAY BE USED MORE THAN ONCE. REFER TO FIGURE 10-8 IN YOUR TEXT.

A. DESCRIPTOR	B. SYMBOLS
5-35. Warm front	1.
5-36. Stationary front	2.
5-37. Cold front	
5-38. Occluded front	3.
5-39. Blue line	
5-40. Red line	4.
5-41. Red and blue line	



5-42. With the approach of a cold front, the initial wind normally blows from which direction?

1. Southwest
2. Northwest
3. Southeast
4. Northeast

5-43. Which of the following characteristics is typical of the passage of a slow-moving cold front?

1. Precipitation is continuous and long lasting
2. The temperature is cold before the front's passage and increases rapidly after passage
3. The dew point raises with the passage of a slow-moving cold front
4. Gusty winds will rarely accompany a cold front's passage

5-44. Which of the following characteristics is typical of the temperature after the passage of a cold front?

1. It will increase very slowly
2. It will increase very rapidly
3. It will decrease very slowly
4. It will decrease very rapidly

5-45. Dew point temperature generally helps to locate fronts, except in mountainous regions.

1. True
2. False

5-46. Your ship is heading north at 15 knots and true wind is blowing from the south at 20 knots, what is the relative wind speed?

1. 5 Kn
2. 15 Kn
3. 20 Kn
4. 35 Kn

5-47. Your ship is heading 225° at 5 knots, and the relative wind is blowing on your starboard bow (070°R) at 17 knots. What is the apparent wind speed and direction?

1. 070° at 22 Kn
2. 155° at 12 Kn
3. 225° at 5 Kn
4. 295° at 17 Kn

5-48 . Anemometer indicates which type of wind?

1. Actual
2. True
3. Apparent
4. Relative

5-49. What is the maximum wind speed indicated on a handheld anemometer?

1. 60 Kn
2. 70 Kn
3. 80 Kn
4. 100 Kn

5-50 . When visual estimation of wind speed is being used, what is meant by fetch area?

1. Area where waves are being generated by current
2. Area where swells are being generated by wind
3. Area where waves are being generated by wind
4. Area where swells are being generated by current

IN ANSWERING QUESTIONS 5-51 THROUGH 5-56, SELECT FROM COLUMN B THE CHARACTERISTIC THAT MATCHES THE SEA CONDITION LISTED IN COLUMN A. RESPONSE WILL BE USED MORE THAN ONCE.

A. SEA CONDITION	B. CHARACTERISTICS
5-51. Gentle breeze	1. Moderately high winds
5-52. Gale	2. Gale
5-53. 48-55 knots	3. Very high waves with long overhanging crests
5-54. 7-10 knots	4. Large wavelets, crests begin to break
5-55. Storm	
5-56. 34-40-knots	

5-57. Which publication contains information on figuring true wind?

1. H.O. Pub 17
2. Pub 217
3. Pub 1310
4. Pub 151

5-58. What is the Fahrenheit equivalent to 23° Celsius?

1. 71
2. 72.1
3. 73.4
4. 77.5

5-59. What is the Celsius equivalent of 47° Fahrenheit?

1. 5.7°
2. 8.3°
3. 8.7°
4. 9.3°